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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/558,237

04/24/2000

Chae-Man Lim

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12/12/2006

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EXAMINER

HARPER, KEVIN C

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/558,237

Applicant(s)

LIM, CHAE-MAN

Examiner

Kevin C. Harper

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-18 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 24 April 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

***Response to Appeal Brief***

In view of the appeal brief filed on September 22, 2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

***Response to Arguments***

1. Applicant's arguments, filed September 22, 2006 with respect to Ostberg receiving a BCCH has been fully considered but they are moot. Examiner notes that in Ostberg the BCCH is transmitted from a base station and must be received at least at the antenna of a mobile station even if the BCCH is not used or decoded at the mobile station. Therefore, the previous rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ostberg.

Applicant's remaining arguments filed September 22, 2006 have been fully considered but they are not persuasive.

2. Applicant argued that in the method of Ostberg a BCCH must be received. However, the sector may be identified through the PSC and SSC only (col. 6, lines 49-53 and 63-65; col. 7, lines 1-5; note: the sector may be identified by the LCG of the SSC). The step of correlating pilot signals is not required in the method of Ostberg to identify the sector (col. 7, lines 10-12) and the BCCH is not required to be used in sector identification.

3. Applicant argued that the sector identification and synchronization of Ostberg requires three steps. However, to identify a sector and achieve synchronization only requires steps 410 and 420 of fig. 4 (col. 6, lines 49-53 and 63-65; col. 7, lines 1-5 and 10-12). Furthermore, applicant has not limited the number of actions, computations or calculations that are performed in a step. Any number of actions, computations or calculations disclosed in Ostberg is considered to meet the claimed two steps or sector identification and synchronization.

4. Applicant argued that three channels are required to perform sector identification and synchronization in Ostberg. However, only the codes of the PSC and SSC are required to perform sector identification and synchronization (col. 6, lines 49-53 and 63-65; col. 7, lines 1-5 and 10-12; fig. 4, steps 410 and 420). Further, the claims do not require only two channels for cell search and synchronization. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Drawings***

5. Figures 1-2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (specification, page 2, line 18, page 3, line 17 and page 5, lines 26-28). See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 14-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The method steps do not include a tangible result, and only perform a calculation of a mathematical algorithm.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The negative limitation “without receiving a broadcast control channel (BCCH)” is not supported by the specification. “BCCH” is not mentioned in the specification, and a means or method for avoiding reception of a broadcast signal is not mentioned in the specification. MPEP 2173.05(i).

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7, 9-12 and 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Ostberg et al. (US 6,504,830).

8. Regarding claims 1, 3-5, 7, 9 and 14, Ostberg discloses a signal transmitting apparatus (fig. 1A, item 120; abstract, lines 1-4). The apparatus has an inherent primary synchronization channel transmitter (fig. 2B, PSC in Perch 1) for placing synchronization information at the start of several slots (col. 2, lines 62; note standardized UMTS) and an inherent secondary synchronization channel transmitter (fig. 2B, SSC in Perch 2) for having a group specific code at the beginning of each slot (col. 5, lines 44-46; col. 6, lines 63-67) with a specific code (col. 7, lines 4-6; col. 8, lines 50-56) which represents one base station in the group. Further regarding claims 9 and 14, Ostberg discloses a cell search apparatus comprising a base station group

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specific code unit and a base station specific code unit (col. 6, lines 63-67; col. 7, lines 4-6; col. 8, lines 50-56) and cell search method.

9. The remaining limitations concerning correlation and detection operations do not further limit the structure of the signal transmitting/receiving apparatus or the steps of the signal transmitting/receiving method (MPEP 2114).

10. Regarding claims 2 and 6, the apparatus has a broadcast channel (figs. 2A and 2B) that is mapped to the SSC (col. 5, lines 32-36).

11. Regarding claims 10 and 15, a base station group specific code detecting unit comprises a correlator for calculating the correlation in each slot (col. 7, lines 1-3) and a base station group detector for determining a base station group using specific codes corresponding to a maxima of correlations detected (col. 7, lines 1-3 and 40-45). Further regarding claim 15, the correlation and detection operations of the cell search are performed in two steps (fig. 4, steps 410 and 420; col. 6, lines 49-53 and 63-65; col. 7, lines 1-5 and 10-12; col. 8, lines 50-56) and without receiving (using) a BCCH (col. 8, lines 50-56).

12. Regarding claims 11 and 16, the group detector comprises an inherent shift operator for comparing correlations to an inherent comma free code table (col. 8, lines 15-24) and a maximum correlation detector for detecting a synchronization code corresponding to a maximum cyclic shifted correlation (col. 7, lines 40-45).

13. Regarding claims 12 and 17, a base station specific code detecting unit comprises a correlator for calculating the correlation in each slot (col. 7, lines 1-3) and a base station detector for determining a base station using specific codes corresponding to a maxima of correlations detected (col. 7, lines 1-3 and 40-45; col. 8, lines 50-56).

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 13 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Ostberg et al., as applied to claim 12 or 17 above, in further view of Nystrom et al. (US 6,526,091).

14. Regarding claims 13 and 18, Ostberg discloses using Gold sequences (col. 3, lines 46-49) and does not disclose correlating Hadamard sequences by a Hadamard transformation. Nystrom discloses using a Hadamard sequence instead of a Gold sequence in a multi-user system (col. 10, lines 1-3 and 25-29). Therefore, it would have been obvious to one skilled the art at the time the invention was made to correlate a Hadamard sequence in the invention of Ostberg in order to use a less complex transformation as is known in the art.

***Allowable Subject Matter***

15. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and if the above rejection under 35 USC 112 is overcome.

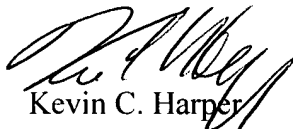
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:00 AM to 7:00 PM ET.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To, can be reached at 571-272-7629. The centralized fax number for the Patent Office is 571-273-8300. For non-official communications, the examiner's personal fax number is 571-273-3166 and the examiner's e-mail address is [kevin.harper@uspto.gov](mailto:kevin.harper@uspto.gov).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications associated with a customer number is available through Private PAIR only. For more information about the PAIR system, see [portal.uspto.gov](http://portal.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin C. Harper

December 4, 2006



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